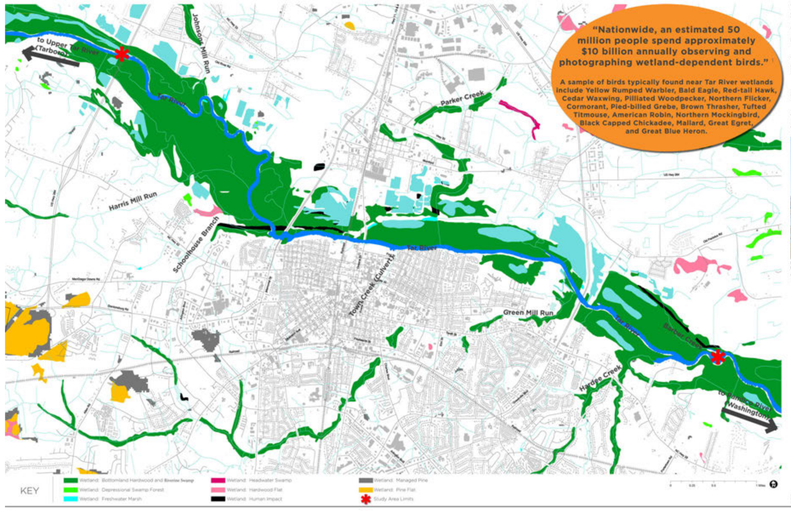
The River Today...



What are wetlands?[2]

Wetlands are areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted for life in saturated soil. Wetlands include swamps, marshes, bogs and similar areas.

What do wetlands do?

Habitat: nesting, spawning, rearing and resting sites for aquatic and land species, food chain production

Hydrology: protection of other areas from wave action and erosion, storage areas for storm water and flood water, ground and surface water aquifer recharge

Water Quality: water quality protection, water filtration /purification, treatment of nonpoint source runoff


Example of Human Impacted Area Wetlands at Utility Easement

Example of Riverine Swamp Forest at River Park North

Example of landscape north of the Tar River

Types of Wetlands (shown on map)

- Bottomland Hardwood and Riverine Swamp Forest: Riverine forested or occasionally scrub/shrub communities usually occurring in floodplains, that are semi-permanantly to seasonally flooded.
- Depressional Swamp Forest: Very poorly drained non-riverine forested or occasionally scrub/shrub communities that are semi-permanantly to seasonally flooded.
- Freshwater Marsh: Herbaceous areas that are flooded for extended periods of time during the growing season.
- Headwater Swamp: Forested systems along the upper reaches of first order streams. Seasonally saturated by high water table or poor drainage.
- Hardwood Flat: Poorly drained instream flats not associated with rivers or estuaries. Seasonally saturated by a high water table or poor drainage.
- Human Impacted Area: Areas of human impact have physically disturbed wetland, but the area is still wetland. Impoundments and cutovers are included, as well as other disturbed areas, such as power lines.
- Managed Pine: Seasonally saturated, managed pine forest (usually loblolly pine) occurring in hydric soils. These wetlands may also contain non-managed pine forest occurring on hydric soils.
- Pine Flat: Palustrine, seasonally saturated pine communities on hydric soils that may become quite dry for part of the year. Generally occur in flat or nearly flat areas that are not associated with a river

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WETLANDS

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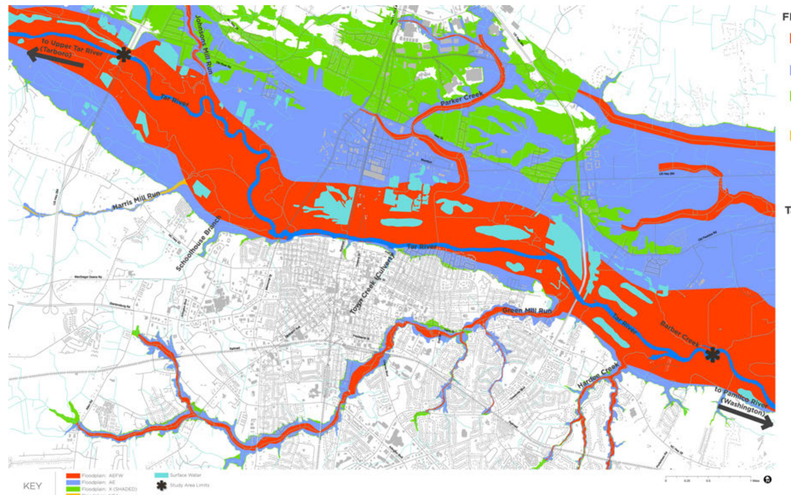

FEMA Floodplain Classifications

- **AEFW: Floodway:** The floodway is the channel of a stream plus any additional floodplain areas that must be kept free of encroachment so that the 1% annual chance flood (100-year flood), can be carried without substantial increases in flood heights. This area is shaded red on the map.
- **AE:** An area inundated by the 1% annual chance flood (100-year flood), for which Base Flood Elevations (BFE) have been determined. This area is shaded blue on the map.
- **X (SHADED):** An area inundated by 0.2% chance flood (500-year flood). An area inundated by the 1% annual chance flood (100-year flood), with average depths of less than one foot, or with drainage areas less than one square mile, or an area protected by levees from the 1% annual chance flood (100-year flood). This area is shaded light green on the map.
- **NEA: Non Encroachment Area:** The Non Encroachment Area is the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot as designated in the Flood Insurance Study report. This area is regulated as a Floodway.

Tar River at the 500-year Flood Level


Tar River at U.S. Highway 264 west of Greenville, Sept. 15, 1999


Flooding at Cypress Glenn Retirement Community in Greenville, Sept. 15, 1999


Flooded residential area in Greenville, Sept. 15, 1999

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FLOODPLAIN CLASSIFICATIONS

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Water Quality Classifications

Nutrient Sensitive Waters (NSW)
Supplemental classification intended for waters needing additional nutrient management due to their being subject to excessive growth of microscopic or macroscopic vegetation.

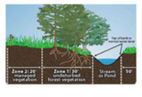
Water Supply IV (WS-IV)
Waters used as sources of water supply for drinking, culinary, or food processing purposes where a WS-I, WS-II or WS-III classification is not feasible. These waters are also protected for Class C uses. WS-IV waters are generally in moderately to highly developed watersheds.

Class C (C)
Waters protected for secondary recreation, fishing, wildlife, fish consumption, aquatic life including propagation, survival, and maintenance of biological integrity, agriculture and other uses suitable for Class C. Secondary recreation includes wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized or incidental manner.

Critical Area (CA)
1/2 mile and draining to water supplies as measured from the normal pool elevation for reservoirs, or 1/2 mile and draining to a river intake.

Riparian Buffers[1]

A riparian buffer is a strip of forested or vegetated land bordering a body of water. The vegetation and root systems in a riparian buffer stabilize the streambank, preventing soil from eroding into the water. Riparian buffers also act as a filter to remove pollutants. Preserving riparian buffers is critical to protecting our water resources. The riparian buffer must remain undisturbed, regardless of property size or type of land use, unless the use is listed in the rules as exempt, potentially allowable or potentially allowable with mitigation.



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WATER QUALITY

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Area of Environmental / Cultural Significance	Regulatory Agencies	Permits, Approvals, Certifications, Etc.	Limitations	Potential Opportunities
Special Flood Hazard Areas (Floodway & Floodplain)	FEMA USACOE City of Greenville	No Rise Certificate or Conditional Letter or Map Revisions (CLOMR) –if impact revealed by modeling	Projects that impact to the floodway and floodplain limits or the 100-year water surface elevation	Boardwalks, Walks, Docks, Blueway, Camp Platforms
Wetlands	USACOE NCDENR DWR	404 Wetlands Permit 401 Water Quality Certification	Structures that create extensive shade	Boardwalks, Overlooks, Camp Platforms, Trails
Riparian Buffer (Tar-Pamilico)	NCDENR DWR	Tar/Pam Riparian Buffer Authorization	Zone 1: first 30' must remain undisturbed with the exception of certain activities Zone 2: outer 20' must be vegetated, but certain additional uses are allowed	Exempt and/or Allowable: Greenway/hiking trails, Playground equipment, Road crossings, Stream bank stabilization, Stream restoration, Vegetation management , Wetland restoration
Wildlife and Natural Vegetation	NCDENR	EA and/or EIS per SEPA / NEPA (FONSI)	Avoid habitat of documented rare species such as Bald Eagle.	Interpretative areas, viewing, birding trails, etc.
Archaeological or Historical Value	State Historic Preservation Office City of Greenville	EA and/or EIS per SEPA / NEPA (FONSI) Cert. of Appropriateness	Meet national, state or local guidelines (e.g. Third Street School)	Education, Amenity

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ENVIRONMENTAL REGULATORY FRAMEWORK

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ECOLOGICAL & ENVIRONMENTAL ASSETS

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04.25.2014

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